

GENERAL CONSIDERATIONS

US EPA RECORDS CENTER REGION 5



436566

The Dayton Rust Proof Co. will be responsible for all pipework and appropriate sump construction necessary to complete their water conservation work. The effect of these measures, to date, has been to reduce water consumption from 277 gpm in average operations to an actual 200 gpm maximum in two weeks of recently metered water consumption at full production rates.

As will be seen, the design capacity of the proposed treatment plant is 240 gpm. With built-in flow equalization of 50 minutes duration at 200 gpm, maximum flow, the strength/volume equalization can be held comfortably within the designed capability for metals and cyanide treatment by the proposed plant.

The flow segregation and collection system is depicted on the drawing developed for pipe routing and checking pump capabilities as outlined in the equipment specifications developed by Lancy International Inc. While that company is considered to have proposed a classical treatment system and offers to furnish specific equipment, the Dayton Rust Proof Co. does not bind itself to Lancy International Inc. as a supplier. However, regardless of the supplier, the destruction process will be adopted and, as such, will closely resemble that proposed by Lancy International Inc.

The flow segregation and collection system does, as will be evident from study of the relevant drawings, reduce the number of lift stations as proposed on the Lancy layout schematics. However, it is proposed by the Dayton Rust Proof Co. to transfer chromate dumps by pumping directly from the chromate dip tanks in each of the plating lines. These, being duplicated so as to be used alternately, provide up to 4 or 5 hours minimum interval for transfer to the dump treatment facilities. In principle, 2 inch lines will be used for general transfer lines, while 4 inch transfer lines will be used for cyanide dumps.

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DESIGN CONSIDERATIONS (Continued)

* BATCH TREATMENT VERSUS FEED AND BLEED (Continued)

4. pH and ORP electrodes are designed for dilute solutions and have a shelf life of two years. If these items are used in a feed and bleed situation, it is believed that their life will be much less than it would be under proper conditions due to the significant increase in waste contaminant loadings.

* HAND STRIP LINE

As will be seen from the accompanying documentation, Dayton Rust Proof Company has re-considered the difficulties associated with chemical nickel-strip operations in connection with waste water treatment.

As an alternative, it has been decided to re-activate nickel re-work (and re-plate without stripping).

* BASE SYSTEM - EQUIPMENT LIST

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
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1	LIFT STATION
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	Coated sump by others. Lancy Model No. 50-2124-015/50-10X; modular unit consisting of duplex vertical centrifugal pumps, each rated at 15 GPM, FRP construction, complete with TEFC drive, mounting plate and supports, 2-inch MPT discharge pipe, and level control probes and mounting.
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APPLICATION FEES

Estimated cost of plant	\$375,000.00
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Application fees	\$100.00
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estimated cost x .002%	<u>750.00</u>
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Amount to accompany PTI application	<u><u>\$865.00</u></u>
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